

5 A variant human  $\alpha 7$  nicotinic acetylcholine receptor (nAChR) polypeptide is provided wherein the variant contains an amino acid substitution at the valine-274 position of the wild-type human  $\alpha 7$  nAChR. Nucleic acid molecules encoding the variant human  $\alpha 7$  nAChR, vectors and host cells containing such nucleic acid molecules are also  
10 provided. In addition, methods are provided for producing the variant as are methods of using such variants for screening compounds for activity at the nAChR.